

IN THE BOARD OF PATENT APPEALS AND INTERFERENCES

Appellant: Sheng-Ping Zhong
Serial No.: 10/667,151
Filed: 09/18/2003
Title: INJECTABLE THERAPEUTIC FORMULATIONS
Art Unit: 1611
Examiner: Charlesworth E. Rae
Confirm. No.: 8726
Docket No.: 03-151US1

Via EFS Web
P.O. Box 1450
Alexandria, VA 22313-1450

Certificate of Electronic Transmission
Under 37 C.F.R. §1.8

I hereby certify that this correspondence and any document referenced herein are being electronically filed with the USPTO via EFS-Web on March 2, 2009.

Nancy Joyce Simmons
(Printed Name of Person Sending Correspondence)

/nancy joyce simmons/
(Signature)

APPEAL BRIEF UNDER 37 C.F.R. §41.37 AND
PETITION FOR AN EXTENSION OF TIME

Sir:

Appellant filed a Notice of Appeal and a Request for Pre-Appeal Brief Review on December 1, 2008. An Appeal Brief was due February 1, 2009. Appellant hereby requests a one-month extension of time. Thus, an Appeal Brief is now due Monday, March 2, 2009 and is being timely filed. The Office is hereby authorized to charge the fee as set forth in §41.20(b)(2) and the fee for a one-month extension of time for a large entity to Deposit Account 50-1047.

Appellant respectfully requests that the Board of Patent Appeals and Interferences reverse the Examiner's rejection of the claimed subject matter.

I. REAL PARTY IN INTEREST

Scimed Life Systems, Inc. is the assignee of the present invention and the real party in interest.

II. RELATED APPEALS AND INTERFERENCES

No other appeals or interferences within the meaning of 37 C.F.R. § 1.912(c) are known to Appellant's legal representative, or the assignees, which will directly affect, be directly affected by, or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

The claims in this application are claims 1-39.

Claims 22-37 were withdrawn from consideration pursuant to a restriction requirement.

Claims 1-21, 38 and 39, the subject of this appeal, were finally rejected and are provided in the attached Appendix.

Appellant hereby appeals the final decision of the Examiner in the above-identified application rejecting claims 1-21, 38, and 39.

IV. STATUS OF AMENDMENTS

A Final Office Action was mailed on June 9, 2008, rejecting claims 1-21, 38, and 39. A Notice of Appeal and response to the Final Office Action was filed on December 1, 2008, and in an Advisory Action mailed on December 30, 2008, the Examiner indicated that the request for reconsideration was considered but did not place the application in condition for allowance.

The claims have not been amended subsequent to the final rejection.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The present invention provides injectable formulations for chemoablation of tissue. The formulations combine a chemical ablation agent in an amount effective to cause tissue necrosis with a biodisintegrable viscosity adjusting agent to render the formulations highly viscous.

The invention is described in claim 1, the sole independent claim under appeal. Claim 1 is drawn to an injectable formulation comprising: (a) a chemical ablation agent in an amount effective to cause tissue necrosis, and (b) a biodisintegrable viscosity adjusting agent in an amount effective to render the formulation highly viscous, wherein said injectable formulation is a sterile injectable formulation.

The claimed invention provides advantages relative to the prior art (*see* specification, paragraph [0011] to [0015]).

One advantage of the invention is that the formulations have improved retention in prostatic and other tissue, thereby improving delivery efficiency while minimizing adverse effects such as nonspecific damage caused by the chemical ablation agent.

Another advantage is that the injectable formulations that are capable of being injected into tissue using conventional syringes, injection catheters, and so forth, even though once injected, they have good retention in tissue.

Yet another advantage is that the injectable formulations provide controlled release of chemoablative agents.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The following grounds of rejection are presented for review:

Rejections under 35 U.S.C. 103(a) - Gentz et al. or Gentz et al. in view of Flacke et al. and in view of Glajch et al.

Claims 1-13, 19-21, and 38-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gentz et al. (US Patent 6,869,927 B1, "Gentz").

Claims 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gentz in view of Flacke et al. (*Circulation*, 2001), and in view of Glajch et al. (U.S. Patent 5,147,631, "Glajch et al.").

VII. ARGUMENT

The following legal authorities are relied on in the following argument in the order in which they are cited:

In re McLaughlin, 443 F.2d 1392, 170 U.S.P.Q. 209 (C.C.P.A. 1971).
W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 U.S.P.Q. 303 (Fed. Cir. 1983), *cert. denied*, 469, U.S. 851 (1984).
In re Rijckaert, 9 F.3d 1531, 1534, 28 U.S.P.Q.2d 1955, 1957 (Fed. Cir. 1993).
In re Oelrich, 666 F.2d 578, 581-82, 212 U.S.P.Q. 323, 326 (CCPA 1981).
In re Robertson, 169 F.3d 743, 745, 49 U.S.P.Q.2d 1949, 1950-51 (Fed. Cir. 1999).
MPEP 2112 IV.
MPEP § 2142-2143.
In re Jones, 958 F.2d 347, 351, 21 U.S.P.Q.2d 1941, 1943-44 (Fed. Cir. 1992).
In re Fine, 837 F.2d 1071, 1075, 5 U.S.P.Q. 1596, 1598-99 (Fed. Cir. 1988).
Akzo N.V. v. International Trade Commission, 808 F.2d 1471, 1480-81, 1 U.S.P.Q.2d, 1241, 1246 (Fed. Cir. 1986), *cert. denied*, 482 U.S. 909 (1987).
Loctite Corp. v. Ultraseal Ltd., 781 F.2d 861, 874, 228 U.S.P.Q. 90-99 (Fed. Cir. 1985).
In re Clay, 966 F.2d 656, 23 U.S.P.Q.2d, 1058, 1060 (Fed. Cir. 1992).

The References

Gentz et al.

The Gentz et al. patent, titled “Keratinocyte Growth Factor-2 Formulations,” discloses formulations for soft-tissue healing. It discloses formulations of keratinocyte growth factor-2 (KGF-2), a polypeptide “produced by fibroblasts derived from skin and fetal lung” that is involved in the “interaction of keratinocytes, fibroblasts and inflammatory cells at [a] wound site.” (Gentz et al., col. 1, lines 19-67). Gentz et al. teaches that formulations made with KGF-2 polypeptides can “promote or accelerate soft tissue growth or regeneration.” (Gentz et al., col. 2, lines 14-15). The KGF-2 formulations contain KGF-2, a buffer such as acetic acid, and “may also include “*NaCl*, glycine, sucrose or mannitol, or combinations thereof, as a tonicifier at a concentration of from about 0mM to about 150 mM.” (col. 4, lines 33-36)(emphasis added). Gentz et al.

does not teach a chemical ablation agent, whether NaCl-based or otherwise to cause tissue necrosis. There is no disclosure of “ablation,” “necrosis” or “cell death” in Gentz et al. or any disclosure or suggestion of formulations for achieving ablation, necrosis, or cell death.

Flacke et al.

Flacke et al. teaches techniques for producing perfluorocarbon MRI contrast agents made of paramagnetic nanoparticles with high avidity for fibrin. Such fibrin-specific MRI contrast agent allows detection and differentiation between vulnerable and stable atherosclerotic plaques in blood vessels. Flacke et al. does not teach an injectable formulation for chemical ablation of any type.

Glajch et al.

Glajch et al. teaches ultrasound contrast agents made of porous particles of an inorganic material containing an entrapped gas or liquid and having an average particle diameter of about 0.05 to 500 microns, and selected from one or more of the group consisting of: monomeric or polymeric borates; monomeric or polymeric aluminas; monomeric or polymeric carbonates; monomeric or polymeric silicas; and monomeric or polymeric phosphates; and pharmaceutically acceptable organic or inorganic cationic salts thereof. Glajch et al. does not teach an injectable formulation of any type for chemical ablation of tissue.

The Rejection Under Appeal

Rejection of Claim 1 Under 35 U.S.C. §103(a) over Gentz et al.

Claims 1-13, 19-21, and 38-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gentz et al. (US Patent 6,869,927 B1, “Gentz”). The rejection over Gentz et al. is clearly erroneous.

Appellant states that Gentz et al. fails to teach *all* of the claimed elements of the present invention, either explicitly or inherently and thus, the Examiner has failed to establish a *prima facie* case of obviousness.

The invention of claim 1 is directed to an injectable formulation comprising: (a) a *chemical ablation agent in an amount effective to cause tissue necrosis*, and (b) a biodisintegrable viscosity adjusting agent in an amount effective to render the formulation highly viscous, wherein said injectable formulation is a sterile injectable formulation.

Gentz et al. does not teach a chemical ablation agent in an amount effective to cause tissue necrosis, as claimed. Indeed, the words “ablation,” “necrosis” or “cell death” do not appear anywhere in Gentz et al. There is simply no disclosure of chemical ablation agents or any agents that cause tissue necrosis. Without such explicit teaching, the Examiner appears to be asserting that Gentz et al. teaches this element inherently. According to the Examiner’s argument, Gentz et al. teaches sodium chloride, which the Examiner states is a chemical ablation agent, and thus, the sodium chloride inherently reads upon the claimed “chemical ablation agent in an amount effective to cause tissue necrosis.”

Appellant respectfully disagrees and states that Gentz et al. fails to teach a chemical ablation agent, either explicitly or inherently. Appellant admits that Gentz et al. discloses NaCl solutions, i.e., sodium chloride solutions. However, Gentz et al. fails to teach or to suggest use of sodium chloride as a chemical ablation agent or teach sodium chloride in an amount effective to cause tissue necrosis. To claim that the sodium chloride of Gentz et al. inherently teaches a chemical ablation agent is to ignore the teachings of Gentz et al. itself, which teaches the use of sodium chloride in formulations to create an “isotonic” salt solution.

Instead of offering evidence, the Examiner asserts without any show of evidence that “sodium chloride of about 150 mM is *reasonably construed* to serve as a chemical ablation agent in [an] amount effective to cause tissue necrosis and to *reasonably serve* as a biodisintegrable viscosity adjusting agent in an amount effective to render the formulation highly viscous.”

In a conclusory manner that is not supported by Gentz et al. itself, the Examiner has made an error by making purported “reasonable” constructions that are not supported by the record or any evidence. On this record, there is no evidence that such “reasonable” assumptions are made other than through the use of hindsight gleaned only from ’s

disclosure, which is improper. *See, e.g., In re McLaughlin*, 443 F.2d 1392, 170 U.S.P.Q. 209 (C.C.P.A. 1971).

The Examiner does not show where his assertion is supported that sodium chloride of about 150 mM is reasonably construed to serve as a chemical ablation agent in an amount effective to cause tissue necrosis. Likewise, the Examiner has offered no evidence to support his assertion that sodium chloride can reasonably serve as a biodisintegrable viscosity adjusting agent in an amount effective to render the formulation highly viscous.”

Even if it were assumed for the sake of argument that sodium chloride of about 150 mM is of sufficient concentration to cause tissue necrosis, Appellant respectfully states that the formulations of Gentz et al. would appear to *not be 150 mM NaCl*, as alleged by the Examiner. Although Gentz et al. discloses *adding* NaCl solutions of up to 150 mM (millimolar) NaCl to create KGF-2 formulations, and after becoming diluted with the other components, the final resulting formulations, themselves, are in much lower concentrations at the nanomolar, not millimolar levels. This is evidence, for example, in several of the examples in Gentz et al. which disclose using “125 nM NaCl,” as one of the ingredients in the formulations or, as the Examiner cites, NaCl is added as a “tonicifier at a concentration of from about 0mM to about 150mM.” It is clear upon close inspection that the concentration of NaCl is then *further diluted* with other components to form “*isotonic*” solutions (col. 7, line 61)(emphasis added). For instance, Gentz et al. discloses that “the lyophilized KGF-2 polypeptide formulations are reconstituted in sterile water so as to maintain *isotonic* conditions of about 290 mOsm.” (col. 7, lines 47-61)(emphasis added). Another example teaches taking 125 nM NaCl, and mixing it with other components, including “*water as diluent*.” (col. 6, line 19).

As would be appreciated by one of ordinary skill in the art, an *isotonic* NaCl solution would *not cause tissue necrosis* since one of skill would appreciate that an isotonic solution would have the salinity of normal bodily fluids. The Examiner, however, does not appreciate that isotonic saline solutions do not cause chemical ablation. Rather, in the Advisory Action dated December 30, 2008, the Examiner incorrectly states that because he believes that the gross weight of sodium chloride utilized in the prior art formulations versus the instant application overlap in range, the

prior art formulation must necessarily function as a chemical ablation agent. For example, he states that “150 nM of NaCl as taught by the prior art is equal to 8.76 g NaCl, which overlaps with the instant chemical ablative amount of NaCl in the instant exemplified formulation comprising **5-30% NaCl (= 5-30 grams NaCl).**” Appellant states that the Examiner’s assumption is erroneous in assuming that 5-30 grams of NaCl equals 5-30% NaCl. Appellant states that where the number of grams denotes weight of a substance, molarity, M, denotes “[t]he molar concentration of a solution, usually expressed as the number of moles of solute per liter of **solution.**” (See The American Heritage® Dictionary of the English Language, Fourth Edition (2000) by Houghton Mifflin Company (emphasis added). Appellant respectfully states that the Examiner has not taken into account the fact that the total volume of the formulation solution must be taken into account in determining whether the NaCl contained in the formulations of Gentz et al. inherently meet the claimed limitation.

Also, when an NaCl solution is “diluted” with either water or other components of the formulation, it **does not** have the same concentration of the initial NaCl solution as added. Appellant respectfully states that this fact is apparently not appreciated by the Examiner when he asserts that since Gentz et al. teaches using NaCl solutions of 0-150mM, that the resulting KGF-2 formulations must also contain the NaCl in its original, undiluted molar concentration of 0-150 mM.

Further, the Examiner’s various mathematical calculations of molarity and gross weights of NaCl sidesteps the important fact that Gentz et al. **teaches away** from formulations that kill or necrotize tissue by explicitly teaching that the formulations are isotonic and promote healing of tissue, not chemical removal of tissue.

Appellant asserts that the Examiner cannot pick and choose certain portions of a reference to the exclusion of other relevant portions. “A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention.” *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 U.S.P.Q. 303 (Fed. Cir. 1983), *cert. denied*, 469, U.S. 851 (1984). The fact that Gentz et al. **teaches away from chemical ablation** is further addressed below.

A holding of inherency **must** flow as a necessary conclusion from the prior art, not simply a possible one and the Examiner has not met this burden. The fact that a

certain result or characteristic *may* occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 U.S.P.Q.2d 1955, 1957 (Fed. Cir. 1993) (reversed rejection because inherency was based on what would result due to optimization of conditions, not what was necessarily present in the prior art); *In re Oelrich*, 666 F.2d 578, 581-82, 212 U.S.P.Q. 323, 326 (CCPA 1981). "To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing *may* result from a given set of circumstances is not sufficient.'" *In re Robertson*, 169 F.3d 743, 745, 49 U.S.P.Q.2d 1949, 1950-51 (Fed. Cir. 1999) (citations omitted); MPEP 2112 IV.

Thus, the fact that the Examiner believes that the sodium chloride of Gentz et al. *may* result in the claimed "chemical ablation agent in an amount effective to cause tissue necrosis" is insufficient to establish inherency. This is doubly true since the sodium chloride-containing formulations of Gentz et al. are expressly *not* for promoting cell necrosis and tissue ablation. To the contrary, Gentz et al. teaches adding NaCl to formulations that promote *tissue growth* not tissue necrosis. For instance, Gentz et al. discloses "formulations...*to promote or accelerate soft tissue growth or regeneration, for example in wound healing*" (col. 2, lines 14-16)(emphasis added) and such formulations can include "*NaCl*, glycine, sucrose or mannitol, or combinations thereof, as a *tonicifier* at a concentration of from about 0mM to about 150 mM." (col. 4, lines 33-36)(emphasis added).

Thus, the Examiner's assumption that the formulations of Gentz et al. inherently teach chemical ablation is contrary to the basic teaching of Gentz et al., which discloses formulations for "*soft-tissue growth and regeneration*" (col. 2, lines 2-3)(emphasis added). Rather than reading upon the claimed chemical ablation agent, the disclosure of Gentz et al. would *teach away* one of skill in the art from taking the tissue growth supporting NaCl formulation of Gentz et al. to produce the tissue necrotizing formulation of the claimed invention. The Examiner has simply not shown otherwise.

Thus, the claims are patentable over Gentz et al. since Gentz et al. simply fails to teach or suggest the claimed *chemical ablation agent in an amount effective to cause*

tissue necrosis and further, Gentz et al. teaches away from chemical ablation. Thus, Appellant submits that inherency has not been shown and respectfully requests that the Examiner reconsider and withdraw the rejection under 35 U.S.C. 102(b).

In addition, given that Gentz et al. is directed to formulations for soft-tissue healing, Appellant states that one of ordinary skill in the art would have *no motivation* to modify the formulations of Gentz et al. to arrive at the claimed invention. Rather, one of ordinary skill would be dissuaded from using such formulations to necrotize soft-tissue given the teachings of Gentz et al. Even if it were assumed that such motivation were to exist, Gentz et al. fails to teach or suggest all of the claimed features.

Thus, Appellant asserts that the Examiner has failed to establish a *prima facie* case of obviousness. For a reference or combination of references to support a *prima facie* case of obviousness, three basic criteria must be met: (1) there must be some suggestion and/or motivation to make the necessary modification of the teaching of the reference or references combined to result in the pending claims; (2) there must be a reasonable expectation of success; and (3) the prior art reference must teach or suggest *all the claim limitations*. MPEP § 2142-2143; see *In re Jones*, 958 F.2d 347, 351, 21 U.S.P.Q.2d 1941, 1943-44 (Fed. Cir. 1992); *In re Fine*, 837 F.2d 1071, 1075, 5 U.S.P.Q. 1596, 1598-99 (Fed. Cir. 1988)(emphasis added).

The Examiner has not shown such motivation or suggestion in either Gentz et al. or knowledge generally available to one of ordinary skill in the art. Further, there is no showing that if the tissue healing formulations of Gentz et al. were modified so that they were tissue necrotizing instead of tissue healing, that an injectable formulation made of a chemical ablation agent that results in tissue necrosis as claimed would be realized.

Finally, the prior art reference (or references when combined) fails to teach or suggest *all* the claimed features, either explicitly or inherently. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in Appellant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). As discussed above, Gentz et al. simply fails to teach a *chemical ablation agent in an amount effective to cause tissue necrosis*, but rather teach away from tissue necrosis and teaches tissue healing. The ancillary amount of sodium chloride used in the KGF-2 formulation of Gentz et al. to create an isotonic

solution for tissue healing simply does not meet the claim requirement that the sodium chloride is in amount effective to cause tissue necrosis.

For at least these reasons, Appellant respectfully submits that claims 1-13, 19-21 and 38-39 are patentable over Gentz et al.

Rejection Under 35 U.S.C. §103(a) over Gentz et al. in view of Flacke et al. or Glajch et al.

Claims 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gentz in view of Flacke et al. (*Circulation*, 2001), and in view of Glajch et al. (US Patent 5,147,631, "Glajch et al.").

The rejected claims are all dependent upon independent Claim 1, and thus include all of the features of that claim together with the further claim features explicitly recited.

The deficiencies of Gentz et al. have been discussed above. Specifically, Gentz et al. is deficient in that it does not describe a *chemical ablation agent in an amount effective to cause tissue necrosis*.

Neither Flacke et al. nor Glajch et al. teaches a chemical ablation agent in an amount effective to cause tissue necrosis. Flacke et al. was cited for purportedly teaching MRI contrast agents and Glajch et al. was cited for purportedly teaching ultrasound contrast agents.

Flacke et al. teaches techniques for producing perfluorocarbon MRI contrast agents made of paramagnetic nanoparticles with high avidity for fibrin. Such fibrin-specific MRI contrast agent allows detection and differentiation between vulnerable and stable atherosclerotic plaques in blood vessels. Flacke et al. does not teach an injectable formulation for chemical ablation of any type.

Glajch et al. invention teaches ultrasound contrast agents made of porous particles of an inorganic material containing an entrapped gas or liquid and having an average particle diameter of about 0.05 to 500 microns, and selected from one or more of the group consisting of: monomeric or polymeric borates; monomeric or polymeric aluminas; monomeric or polymeric carbonates; monomeric or polymeric silicas; and monomeric or polymeric phosphates; and pharmaceutically acceptable organic or inorganic cationic

salts thereof. Glajch et al. does not teach an injectable formulation for chemical ablation of any type.

Neither reference teaches or mentions any of the elements of independent claim 1. As such, they do not help remove the basic infirmity of the primary reference in establishing a *prima facie* case of obviousness.

To make such a combination and make a conclusion of obviousness could only be based on the use of *undue* hindsight, which has long been held to be impermissible. See *Akzo N.V. v. International Trade Commission*, 808 F.2d 1471, 1480-81, 1 U.S.P.Q.2d, 1241, 1246 (Fed. Cir. 1986), *cert. denied*, 482 U.S. 909 (1987), *Loctite Corp. v. Ultraseal Ltd.*, 781 F.2d 861, 874, 228 U.S.P.Q. 90-99 (Fed. Cir. 1985).

To whatever extent one *could* combine the teachings of the two references, it is quite clear that the claimed formulation that causes tissue necrosis would still not be formed. Even with the use of impermissible hindsight, one of ordinary skill in the art would not have arrived at the present invention from a combination of the reference teachings. Just as important is the fact that there would be no motivation or suggestion to combine the references as the Examiner has done. See *In re Clay*, 966 F.2d 656, 23 U.S.P.Q.2d, 1058, 1060 (Fed. Cir. 1992), *In re Jones*, 958 F.2d 347, 351, 21 U.S.P.Q.2d 1941, 1943-44 (Fed. Cir. 1992), *In re Fine*, 837 F.2d 1071, 1075, 5 U.S.P.Q.2d, 1596, 1598-99 (Fed. Cir. 1988).

For at least these reasons, it is respectfully submitted that claim 1 is patentable over the cited references. The rejected claims depend upon claim 1 and are therefore patentable for at least the same reasons as is claim 1.

Finally, Appellant acknowledges that the Examiner has made of record and purportedly relied upon four other references: Maguire et al. (U.S. Pat. No. 6,652,515); Daellenbach (U.S. Pub. No. 2003/0163111 A1); Feng (U.S. Pub. No. 2005/0048132 A1); and Escandon et al. (U.S. Pub. No. 2003/0092689 A1). However, Appellant states that *none* of these four references were *directly applied in a rejection of any of the claims* as either a primary or secondary reference. Appellant asserts that the Examiner is required to state clearly the prior art references that are the basis for each rejection and has only done so for the Gentz et al., Flacke et al., and Glajch et al. references.

Even if these references were directly applied in a rejection as either a primary or secondary reference, the obviousness rejection must still fail since the combination of all of the references, still does not teach *all* of the claimed elements of the invention.

Maguire et al. teaches an alcohol-based liquid injections for treating atrial arrhythmia. Daellenbach et al. teach a needle-free injection system for administering liquids such as saline solutions. Feng et al. teach liquid hydrochloric acid injections into tumors. Escandon et al. teach injecting ethanol to treat diseased prostate tissue. These references do not remedy the fundamental deficiency of Gentz et al. as discussed above.

VIII. CONCLUSION

The references relied on by the Examiner do not support a *prima facie* case of obviousness. Thus, it is respectfully submitted that reversal of the rejections of record is in order.

IX. FEES

Appellant's undersigned representative hereby authorizes the Commissioner to charge any fees due and owing with respect to the filing of this paper to deposit account No. 50-1047.

Dated: March 2, 2009

Respectfully submitted,

Mayer & Williams PC
251 North Avenue West, 2nd Floor
Westfield, NJ 07090
Tel: 908-518-7700, ext. 7
Fax: 908-518-7795

/Keum J. Park/
Keum J. Park, Esq.
Registration No. 42,059

X. CLAIMS APPENDIX

1. (Original) An injectable formulation comprising: (a) a chemical ablation agent in an amount effective to cause tissue necrosis, and (b) a biodisintegrable viscosity adjusting agent in an amount effective to render the formulation highly viscous, wherein said injectable formulation is a sterile injectable formulation.
2. (Original) The injectable formulation of claim 1, wherein said ablation agent is an osmotic-stress-generating agent.
3. (Original) The injectable formulation of claim 1, wherein said ablation agent is an organic ablation agent.
4. (Original) The injectable formulation of claim 1, wherein said ablation agent is ethanol.
5. (Original) The injectable formulation of claim 1, wherein said ablation agent is a salt.
6. (Original) The injectable formulation of claim 1, wherein said ablation agent is sodium chloride.
7. (Original) The injectable formulation of claim 1, wherein said viscosity adjusting agent is present in an amount effective to provide a kinematic viscosity ranging from 5,000 cps to 100,000 cps.
8. (Original) The injectable formulation of claim 1, wherein said viscosity adjusting agent is present in an amount effective to provide a kinematic viscosity ranging from 10,000 cps to 50,000 cps.

9. (Original) The injectable formulation of claim 1, wherein said viscosity adjusting agent comprises a polysaccharide.

10. (Original) The injectable formulation of claim 9, wherein said viscosity adjusting agent is a polysaccharide selected from methylcellulose, hydroxyethylcellulose, hydroxypropyl cellulose, hydroxypropyl methyl cellulose, methylhydroxyethylcellulose, methylhydroxypropylcellulose, carboxymethyl cellulose and its salts, hydroxyethylcarboxymethylcellulose and its salts, carboxymethylhydroxyethylcellulose and its salts, alginic acid and its salts, hyaluronic acid and its salts, carageenan, chitosan, xanthan gum, guar gum, gum arabic, gum karaya , gum ghatti, konjac and gum tragacanth.

11. (Original) The injectable formulation of claim 1, wherein said viscosity adjusting agent comprises a polypeptide.

12. (Original) The injectable formulation of claim 11, wherein said viscosity adjusting agent is selected from gelatin and collagen.

13. (Original) The injectable formulation of claim 1, wherein said viscosity adjusting agent is selected from carboxyvinyl polymer, polyvinylpyrrolidone, polyacrylic acid, polyacrylamide, polyacilic acid/acrylamide copolymer, polyethylene oxide, polypropylene oxide, poly(ethylene oxide-propylene oxide), polymetaphosphate, polyethyleneamine, polypyridine, as well as salts thereof.

14. (Original) The injectable formulation of claim 1, further comprising an imaging contrast agent.

15. (Original) The injectable formulation of claim 14, wherein the imaging contrast agent is an MRI imaging contrast agent.

16. (Original) The injectable formulation of claim 14, wherein the imaging contrast agent is an ultrasonic imaging contrast agent.
17. (Original) The injectable formulation of claim 16, wherein the ultrasonic imaging contrast agent comprises a plurality of solid particles.
18. (Original) The injectable formulation of claim 17, wherein the plurality of solid particles is selected from calcium carbonate particles, hydroxyapatite particles, silica particles, poly(lactic acid) particles, and poly(glycolic acid) particles.
19. (Original) The injectable formulation of claim 1, wherein said injectable formulation comprises a plurality of viscosity adjusting agents.
20. (Original) The injectable formulation of claim 1, wherein said injectable formulation comprises a plurality of ablation agents.
21. (Original) The injectable formulation of claim 1, wherein said injectable formulation further comprises a liquid selected from water and an organic solvent.
22. (Withdrawn) A method of treatment comprising injecting the injectable formulation of any of claims 1-21 into the tissue of a subject.
23. (Withdrawn) The method of claim 22, wherein said tissue is prostatic tissue.
24. (Withdrawn) The method of claim 23, wherein said subject has been diagnosed with benign prostatic hypertrophy.
25. (Withdrawn) The method of claim 23, wherein the injectable formulation is transrectally injected into the subject.


26. (Withdrawn) The method of claim 23, wherein a plurality of injections are performed concurrently with a non-invasive imaging technique.
27. (Withdrawn) A prostatic ablation formulation comprising a prostatic ablation agent selected from free-radical generating ablation agents, oxidizing ablation agents and tissue fixing ablation agents.
28. (Withdrawn) The prostatic ablation formulation of claim 27, wherein the injectable prostatic formulation comprises a free-radical generating ablation agent.
29. (Withdrawn) The prostatic ablation formulation of claim 28, wherein the free-radical generating ablation agent is a peroxide compound.
30. (Withdrawn) The prostatic ablation formulation of claim 27, wherein the injectable prostatic formulation comprises an oxidizing ablation agent.
31. (Withdrawn) The prostatic ablation formulation of claim 27, wherein the injectable prostatic formulation comprises a tissue fixing ablation agent.
32. (Withdrawn) The prostatic ablation formulation of claim 31, wherein the tissue fixing ablation agent is selected from formaldehyde and glutaraldehyde.
33. (Withdrawn) A system for the chemical ablation of tissue, said system comprising:
- (a) an injectable formulation comprising: (i) a chemical ablation agent in an amount effective to cause tissue necrosis, and (ii) a biodegradable viscosity adjusting agent in an amount effective to render the formulation highly viscous; and
 - (b) an apparatus for transcutaneously inserting said dosage form into said tissue.
34. (Withdrawn) The system of claim 33, wherein the apparatus is configured to insert said dosage form into the tissue transrectally.

35. (Withdrawn) The system of claim 33, wherein the tissue is prostatic tissue.
36. (Withdrawn) The method of claim 22, further comprising injecting a crosslinking agent into said tissue in an injection step separate from the injection of said injectable formulation.
37. (Withdrawn) The method of claim 36, wherein said crosslinking agent is injected subsequent to the injection of said injectable formulation.
38. (Original) The injectable formulation of claim 1, wherein said injectable formulation comprises an ionically crosslinkable polymer.
39. (Original) The injectable formulation of claim 38, wherein said ionically crosslinkable polymer is an alginate polymer.

XI. EVIDENCE APPENDIX

The American Heritage® Dictionary of the English Language, Fourth Edition (2000) by Houghton Mifflin Company, and an online version of dictionary entry as downloaded from <http://www.bartleby.com/61/18/M0371800.html> on March 2, 2009, is attached on the following page.

OVER 75% OF YOU HAVE FAILED THE DUMB TEST



Great Books Online

[Reference](#)
[Yarn](#)
[Fiction](#)
[Nonfiction](#)

[Home](#)
[Subjects](#)
[Titles](#)
[Authors](#)

[Encyclopedia](#)
[Dictionary](#)
[Thesaurus](#)
[Quotations](#)
[English Usage](#)

[Reference > American Heritage® > Dictionary](#)


[< molar](#)
[molarities >](#)

[CONTENTS](#)
[INDEX](#)
[ILLUSTRATIONS](#)
[BIBLIOGRAPHIC RECORD](#)

The American Heritage® Dictionary of the English Language: Fourth Edition. 1980.

molarity

SYLLABICATION: mo-lar-i-ty

PREDOMINANT:  mɒ-lər-i-ˈteɪ

NOUN


Inflected forms: pl. molarities

Chemistry The molar concentration of a solution, usually expressed as the number of moles of solute per liter of solution.

The American Heritage® Dictionary of the English Language, Fourth Edition. Copyright © 2000 by Houghton Mifflin Company. Published by the Houghton Mifflin Company. All rights reserved.

[CONTENTS](#)
[INDEX](#)
[ILLUSTRATIONS](#)
[BIBLIOGRAPHIC RECORD](#)


[< molar](#)
[molarities >](#)



Search

Click here to shop the Bartleby Bookstore.

Voltaire Photo Advertising Linking Terms & Use © 2000 by Bartleby.com



Learn Audio Recording


Learn music production in high-end recording studios by pro engineers

[www.audiorecording101.com](#)


Ad by Google

1 Flat Stomach Rule: obey

I cut out 2 lbs of stomach fat per week by obeying this 1 old rule.



↓



Get Started Today

Learn More

XII. RELATED PROCEEDINGS APPENDIX

None.